

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:SSPATMXM01

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JAN 02	STN pricing information for 2008 now available
NEWS	3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	5	JAN 28	MARPAT searching enhanced
NEWS	6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS	7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS	8	JAN 28	MEDLINE and LMEADLINE reloaded with enhancements
NEWS	9	FEB 08	STN Express, Version 8.3, now available
NEWS	10	FEB 20	PCI now available as a replacement to DPCI
NEWS	11	FEB 25	IFIREF reloaded with enhancements
NEWS	12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS	13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS	14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/Caplus and CASREACT patent number format for U.S. applications updated
NEWS	17	MAR 31	LPCI now available as a replacement to LDPCI
NEWS	18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	22	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	23	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	24	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	25	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	26	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	27	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	28	JUN 19	CAS REGISTRY includes selected substances from web-based collections

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Jun 2008 VOL 148 ISS 26

FILE LAST UPDATED: 23 Jun 2008 (20080623/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s us20070148581/pn

L1 1 US20070148581/PN

=> sel rn

E1 THROUGH E5 ASSIGNED

=> s el-e5

22226 102-71-6/BI

10933 11105-01-4/BI

29444 69-72-7/BI

65 808752-25-2/BI

1 854985-67-4/BI

L2 62303 (102-71-6/BI OR 11105-01-4/BI OR 69-72-7/BI OR 808752-25-2/BI

=> s 11 and 12

L3 1 L1 AND L2

=> d ibib abs hitstr hitind

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:547798 CAPLUS Full-text

DOCUMENT NUMBER: 143:86703

TITLE: Photoresist composition and method for forming resist pattern

INVENTOR(S): Tsuji, Hiromitsu; Endo, Kotaro

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

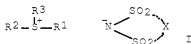
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005057284	A1	20050623	WO 2004-JP17719	20041129
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, ID, TG				
JP 2005172949	A	20050630	JP 2003-409500	20031208
US 20070148581	A1	20070628	US 2006-581777	20060606 <--
PRIORITY APPLN. INFO.:			JP 2003-409500	A 20031208
			WO 2004-JP17719	W 20041129

OTHER SOURCE(S): MARPAT 143:86703

GI



AB Disclosed is a photoresist composition which contains (A) a polymer component comprising an alkali-soluble constitutional unit having an alicyclic group which has both (i) a fluorine atom or a fluorinated alkyl group and (ii) an alc. hydroxyl group, which polymer component has an alkali solubility that is changed by action of an acid, and (B) at least one sulfonium compound represented by at least the general formula I (X = C2-6-fluoroalkylene; R1-3 = aryl, alkyl) as an acid generator which generates an acid when exposed to light.

IT 69-72-7, Salicylic acid, uses 102-71-6, Triethanol

amine, uses

RL: MOA (Modifier or additive use); USES (Uses)

(additive to photoresist composition; photoresist composition and method for forming resist pattern)

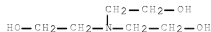
RN 69-72-7 CAPLUS

CN Benzoic acid, 2-hydroxy- (CA INDEX NAME)



RN 102-71-6 CAPLUS

CN Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)



IT 11105-01-4, Silicon oxynitride

RL: DEV (Device component use); USES (Uses)

(coating layer on Si wafer; photoresist composition and method for forming resist pattern)

RN 11105-01-4 CAPLUS

CN Silicon nitride oxide (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
N	x	17778-88-0
O	x	17778-80-2
Si	x	7440-21-3

IT 808752-25-2

RL: CAT (Catalyst use); USES (Uses)

(photoacid generator; photoresist composition and method for forming resist pattern)

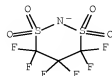
RN 808752-25-2 CAPLUS

CN Sulfonium, triphenyl-, salt with 4,4,5,5,6,6-hexafluorodihydro-4H-1,3,2-dithiazine 1,1,3,3-tetraoxide (1:1) (CA INDEX NAME)

CM 1

CRN 146063-77-6

CMF C3 F6 N 04 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



IT 854985-67-4

RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition and method for forming resist pattern)

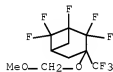
RN 854985-67-4 CAPLUS

CN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

CM 1

CRN 854985-66-3

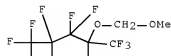
CMF C10 H10 F8 O2



CM 2

CRN 681242-79-5

CMF C10 H10 F8 O2



IC ICM G03F007-004

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 38, 76

IT 69-72-7, Salicylic acid, uses 102-71-6, Triethanol
amine, uses
RL: MOA (Modifier or additive use); USES (Uses)
(additive to photoresist composition; photoresist composition and method for
forming resist pattern)

IT 11105-01-4, Silicon oxynitride
RL: DEV (Device component use); USES (Uses)
(coating layer on Si wafer; photoresist composition and method for forming
resist pattern)

IT 808752-25-2
RL: CAT (Catalyst use); USES (Uses)
(photoacid generator; photoresist composition and method for forming resist
pattern)

IT 954985-67-4
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition and method for forming resist pattern)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 854985-67-4/rn
1 854985-67-4
0 854985-67-4D
L4 1 854985-67-4/RN
(854985-67-4 (NOTL) 854985-67-4D)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	27.66	27.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8
DICTIONARY FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> s 14

L5 1 854985-67-4/RN

=> d fide

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN

RN 854985-67-4 REGISTRY

ED Entered STN: 13 Jul 2005

CN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

MF (C10 H10 F8 O2 . C10 H10 F8 O2)x

CI PMS

PCT Polyother, Polyother only

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: USES (Uses)

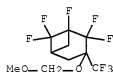
Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring Formula	Ring Identifier	RID Occurrence
EA	ES	SZ	RF	RID	Count
C4-C5	C4-C5	4-5	C7	99.7.1	1 in CM
					2
C4-C6	C4-C6	4-6	C7	107.7.1	1 in CM
					1

CM 1

CRN 854985-66-3

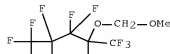
CMF C10 H10 F8 O2



CM 2

CRN 681242-79-5

CMF C10 H10 F8 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	3.36	31.23
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.80

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8
DICTIONARY FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> S 854985-66-3/RN

L6 1 854985-66-3/RN

=> SET NOTICE 1 DISPLAY

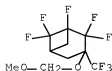
NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=> D L6 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y
THE ESTIMATED COST FOR THIS REQUEST IS 6.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
RN 854985-66-3 REGISTRY
CN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)- (CA INDEX NAME)

MF C10 H10 F8 O2
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=>

=> s 854985-66-3/rn
L7 1 854985-66-3/RN

=> s 681242-79-5/rn
L8 1 681242-79-5/RN

=> FIL CAPLUS
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
3.38	34.61

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-0.80

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Jun 2008 VOL 148 ISS 26
FILE LAST UPDATED: 23 Jun 2008 (20080623/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

```
=> s 17 and 18
      0 L7
      0 L8
L9      0 L7 AND L8
```

```
=> s 681242-79-5/crn
    REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.
```

L11 3 L10

```
=> s 854985-66-3/crn
    REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.
```

L13 1 L12

```
=> FIL STNGUIDE
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                     ENTRY    SESSION
FULL ESTIMATED COST                1.92      38.41

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE    TOTAL
                                     ENTRY    SESSION
CA SUBSCRIBER PRICE                0.00      -0.80
```

FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun 20, 2008 (20080620/UP).

```
=> FIL REGISTRY
COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                     ENTRY    SESSION
FULL ESTIMATED COST                0.30      38.71

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE    TOTAL
                                     ENTRY    SESSION
CA SUBSCRIBER PRICE                0.00      -0.80
```

FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8
 DICTIONARY FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> ...Testing the current file.... screen

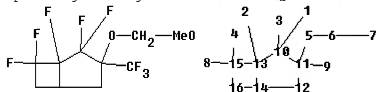
ENTER SCREEN EXPRESSION OR (END):end

=> screen 2043

L14 SCREEN CREATED

=>

Uploading C:\Program Files\STNEXP\Queries\fluoromonol-1.str



```
chain nodes :
1 2 3 4 5 6 7 8 9
ring nodes :
10 11 12 13 14 15 16
chain bonds :
1-10 2-13 3-10 4-15 5-11 5-6 6-7 8-15 9-11
ring bonds :
10-11 10-13 11-12 12-14 13-15 13-14 14-16 15-16
exact/norm bonds :
5-11 10-11 10-13 11-12 12-14 13-15 13-14 14-16 15-16
exact bonds :
1-10 2-13 3-10 4-15 5-6 6-7 8-15 9-11
```

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom

L15 STRUCTURE UPLOADED

=> que L15 AND L14

L16 QUE L15 AND L14

=> s l16

SAMPLE SEARCH INITIATED 13:53:40 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1 TO ITERATE

100.0% PROCESSED 1 ITERATIONS 0 ANSWERS
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 1 TO 80

PROJECTED ANSWERS: 0 TO 0

L17 0 SEA SSS SAM L15 AND L14

=> s l16 sss full

FULL SEARCH INITIATED 13:53:52 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 20 TO ITERATE

100.0% PROCESSED 20 ITERATIONS 3 ANSWERS
 SEARCH TIME: 00.00.01

L18 3 SEA SSS FUL L15 AND L14

=> d scan

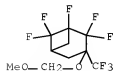
L18 3 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

IN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI)

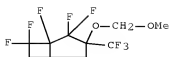
MF (C10 H10 F8 O2 . C10 H10 F8 O2)x

CI PMS

CM 1



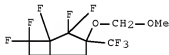
CM 2



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L18 3 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
 IN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-,
 polymer with 1,2-bis(chloromethoxy)ethane and 1,2,2,7,7-pentafluoro-3-
 (methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI)
 MF (C10 H10 F8 O2 . C8 H6 F8 O . C4 H8 Cl2 O2)x
 CI PMS

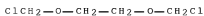
CM 1



CM 2



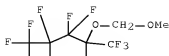
CM 3



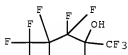
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L18 3 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
 IN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-,
 polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-
 (trifluoromethyl)bicyclo[3.2.0]heptane (9CI)
 MF (C10 H10 F8 O2 . C8 H6 F8 O)x
 CI PMS

CM 1



CM 2



ALL ANSWERS HAVE BEEN SCANNED

=> 1

1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d his

(FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008

L1 1 S US20070148581/PN

SEL RN

L2 62303 S E1-E5

L3 1 S L1 AND L2

L4 1 S 854985-67-4/RN

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008

L5 1 S L4

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008

L6 1 S 854985-66-3/RN

SET NOTICE 1 DISPLAY

SET NOTICE LOGIN DISPLAY

L7 1 S 854985-66-3/RN

L8 1 S 681242-79-5/RN

FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008

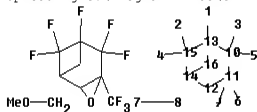
L9 0 S L7 AND L8

S 681242-79-5/CRN

L10 FILE 'REGISTRY' ENTERED AT 13:47:55 ON 24 JUN 2008
 3 S 681242-79-5/CRN
 L11 FILE 'CAPLUS' ENTERED AT 13:47:55 ON 24 JUN 2008
 3 S L10
 S 854985-66-3/CRN
 L12 FILE 'REGISTRY' ENTERED AT 13:48:08 ON 24 JUN 2008
 1 S 854985-66-3/CRN
 L13 FILE 'CAPLUS' ENTERED AT 13:48:09 ON 24 JUN 2008
 1 S L12
 FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008
 FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008
 L14 SCREEN 2043
 L15 STRUCTURE UPLOADED
 L16 QUE L15 AND L14
 L17 0 S L16
 L18 3 S L16 SSS FULL

=>

Uploading C:\Program Files\STNEXP\Queries\fluromono2-1.str



chain nodes :
 1 2 3 4 5 6 7 8
 ring nodes :
 9 10 11 12 13 14 15 16
 chain bonds :
 1-13 2-15 3-10 4-15 5-10 6-11 7-8
 ring bonds :
 9-11 9-12 10-11 10-13 11-12 12-14 13-15 13-16 14-15 14-16
 exact/norm bonds :
 9-11 9-12 10-11 10-13 11-12 12-14 13-15 13-16 14-15 14-16
 exact bonds :
 1-13 2-15 3-10 4-15 5-10 6-11 7-8

Match level :
 1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom
 10:Atom
 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom

L19 STRUCTURE UPLOADED

=> s l19 sss sam
 SAMPLE SEARCH INITIATED 13:56:51 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 3 TO 163
PROJECTED ANSWERS: 0 TO 0

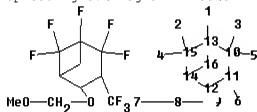
L20 0 SEA SSS SAM L19

=> s l19 sss full
FULL SEARCH INITIATED 13:56:59 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 63 TO ITERATE

100.0% PROCESSED 63 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L21 0 SEA SSS FUL L19

=>
Uploading C:\Program Files\STNEXP\Queries\fluoromono2-2.str



chain nodes :
1 2 3 4 5 6 7 8 9
ring nodes :
10 11 12 13 14 15 16
chain bonds :
1-13 2-15 3-10 4-15 5-10 6-11 7-8 8-9 9-12
ring bonds :
10-11 10-13 11-12 12-14 13-15 13-16 14-15 14-16
exact/norm bonds :
9-12 10-11 10-13 11-12 12-14 13-15 13-16 14-15 14-16
exact bonds :
1-13 2-15 3-10 4-15 5-10 6-11 7-8 8-9

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:Atom
10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom

L22 STRUCTURE UPLOADED

=> s l22 sss sam
SAMPLE SEARCH INITIATED 13:59:37 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

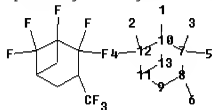
L23 0 SEA SSS SAM L22

=> s l22 sss full
FULL SEARCH INITIATED 13:59:48 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 12 TO ITERATE

100.0% PROCESSED 12 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L24 0 SEA SSS FUL L22

=>
Uploading C:\Program Files\STNEXP\Queries\fluoromono2--3.str



chain nodes :
1 2 3 4 5 6
ring nodes :
7 8 9 10 11 12 13
chain bonds :
1-10 2-12 3-7 4-12 5-7 6-8
ring bonds :
7-8 7-10 8-9 9-11 10-12 10-13 11-12 11-13
exact/norm bonds :
7-8 7-10 8-9 9-11 10-12 10-13 11-12 11-13
exact bonds :
1-10 2-12 3-7 4-12 5-7 6-8

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom
10:Atom
11:Atom 12:Atom 13:Atom

L25 STRUCTURE UPLOADED

=> s l25 sss sam
SAMPLE SEARCH INITIATED 14:02:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 92 TO ITERATE

100.0% PROCESSED 92 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1265 TO 2415
PROJECTED ANSWERS: 0 TO 0

L26 0 SEA SSS SAM L25

=> s l25 sss full

FULL SEARCH INITIATED 14:02:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1676 TO ITERATE

100.0% PROCESSED 1676 ITERATIONS
SEARCH TIME: 00.00.01

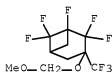
4 ANSWERS

L27 4 SEA SSS FUL L25

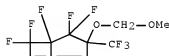
=> d scan

L27 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI)
MF (C10 H10 F8 O2 . C10 H10 F8 O2)x
CI PMS

CM 1



CM 2



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L27 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN Bicyclo[3.1.1]heptan-3-ol, 1,2,2,6,6-pentafluoro-3-(trifluoromethyl)-
MF C8 H6 F8 O
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L27 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

IN Bicyclo[3.1.1]heptan-3-ol, 1,2,2,6,6-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI)

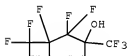
MF (C8 H6 F8 O . C8 H6 F8 O)x

CI PMS

CM 1



CM 2



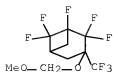
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L27 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

IN Bicyclo[3.1.1]heptane, 1,2,2,6,6-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)-

MF C10 H10 F8 O2

CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=>Testing the current file.... screen

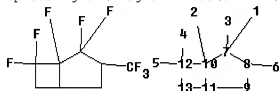
ENTER SCREEN EXPRESSION OR (END):end

=> screen 2043

L28 SCREEN CREATED

=>

Uploading C:\Program Files\STNEXP\Queries\fluormono3.str



chain nodes :

1 2 3 4 5 6

ring nodes :

7 8 9 10 11 12 13

chain bonds :

1-7 2-10 3-7 4-12 5-12 6-8

ring bonds :

7-8 7-10 8-9 9-11 10-12 10-11 11-13 12-13

exact/norm bonds :

7-8 7-10 8-9 9-11 10-12 10-11 11-13 12-13

exact bonds :

1-7 2-10 3-7 4-12 5-12 6-8

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom

10:Atom

11:Atom 12:Atom 13:Atom

L29 STRUCTURE UPLOADED

=> que L29 AND L28

L30 QUE L29 AND L28

=> s l30 sss sam

SAMPLE SEARCH INITIATED 14:06:08 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 6 TO 266
PROJECTED ANSWERS: 0 TO 0

L31 0 SEA SSS SAM L29 AND L28

=> s l30 sss full

FULL SEARCH INITIATED 14:06:16 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 85 TO ITERATE

100.0% PROCESSED 85 ITERATIONS 11 ANSWERS
SEARCH TIME: 00.00.01

L32 11 SEA SSS FUL L29 AND L28

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	899.62	938.33

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.80

FILE 'CAPLUS' ENTERED AT 14:06:28 ON 24 JUN 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Jun 2008 VOL 148 ISS 26

FILE LAST UPDATED: 23 Jun 2008 (20080623/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> d his

```
(FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008
L1      1 S US20070148581/PN
        SEL RN
L2      62303 S E1-E5
L3      1 S L1 AND L2
L4      1 S 854985-67-4/RN

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008
L5      1 S L4

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008
L6      1 S 854985-66-3/RN
        SET NOTICE 1 DISPLAY
        SET NOTICE LOGIN DISPLAY
L7      1 S 854985-66-3/RN
L8      1 S 681242-79-5/RN

FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008
L9      0 S L7 AND L8
        S 681242-79-5/CRN

FILE 'REGISTRY' ENTERED AT 13:47:55 ON 24 JUN 2008
L10     3 S 681242-79-5/CRN

FILE 'CAPLUS' ENTERED AT 13:47:55 ON 24 JUN 2008
L11     3 S L10
        S 854985-66-3/CRN

FILE 'REGISTRY' ENTERED AT 13:48:08 ON 24 JUN 2008
L12     1 S 854985-66-3/CRN

FILE 'CAPLUS' ENTERED AT 13:48:09 ON 24 JUN 2008
L13     1 S L12

FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008

FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008
L14     SCREEN 2043
L15     STRUCTURE UPLOADED
L16     QUE L15 AND L14
L17     0 S L16
L18     3 S L16 SSS FULL
L19     STRUCTURE UPLOADED
L20     0 S L19 SSS SAM
L21     0 S L19 SSS FULL
L22     STRUCTURE UPLOADED
L23     0 S L22 SSS SAM
L24     0 S L22 SSS FULL
L25     STRUCTURE UPLOADED
L26     0 S L25 SSS SAM
L27     4 S L25 SSS FULL
L28     SCREEN 2043
L29     STRUCTURE UPLOADED
L30     QUE L29 AND L28
L31     0 S L30 SSS SAM
L32     11 S L30 SSS FULL
```

=> s 127
 L33 2 L27

=> s 132
 L34 13 L32

=> s 133 and 134
 L35 2 L33 AND L34

=> s 135 not 11
 L36 1 L35 NOT L1

=> d ibib abs hitstr hitind

L36 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:319706 CAPLUS Full-text
 DOCUMENT NUMBER: 144:379243
 TITLE: Black matrix composition, black matrix prepared using
 the same for manufacturing a color filter substrate
 INVENTOR(S): Kang, Yoon-Ho; Kim, Byoung-Joo; Kim, Jang-Sub; Kwon,
 Seong-Gyu
 PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 17 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060073398	A1	20060406	US 2005-233257	20050921
KR 2006027222	A	20060327	KR 2004-76084	20040922
JP 2006099033	A	20060413	JP 2004-355251	20041208
CN 1854894	A	20061101	CN 2005-10129145	20050922
PRIORITY APPLN. INFO.:			KR 2004-76084	A 20040922

AB A black matrix composition includes about 40 parts by weight of a pigment dispersion, about 0.1 to about 1.0 part by weight of a photoinitiator, about 5 to about 20 parts by weight of a photo-polymerizable monomer, about 5 to about 20 parts by weight of a binder resin including an acryl-based copolymer containing fluorine and having a hydroxyl group combined with a side chain of the acryl-based copolymer, about 0.1 to about 0.5 part by weight of epoxy-based monomer containing fluorine and about 35 to about 55 parts by weight of a solvent. A black matrix pattern formed of the black matrix minimizes an ink bleed, thereby improving color property of a liquid crystal display device to which the black matrix pattern is applied.

IT 882050-50-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (binder; black matrix composition for manufacturing color filter substrate containing)

RN 882050-50-2 CAPLUS

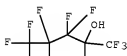
CN Bicyclo[3.1.1]heptan-3-ol, 1,2,2,6,6-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)

CRN 882050-49-9
CMF C8 H6 F8 O



CM 2

CRN 637035-70-2
CMF C8 H6 F8 O



INCL 430007000; 430280100
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 35, 38
IT 863968-44-9, Cyclohexylmethacrylate-glycidyl methacrylate-styrene
copolymer 662050-50-2
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; black matrix composition for manufacturing color filter substrate
containing)

=> d his

(FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008

L1 1 S US20070148581/PN
SEL RN
L2 62303 S E1-E5
L3 1 S L1 AND L2
L4 1 S 854985-67-4/RN

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008

L5 1 S L4

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008

L6 1 S 854985-66-3/RN
SET NOTICE 1 DISPLAY
SET NOTICE LOGIN DISPLAY
L7 1 S 854985-66-3/RN
L8 1 S 681242-79-5/RN

L9 FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008
0 S L7 AND L8
S 681242-79-5/CRN

L10 FILE 'REGISTRY' ENTERED AT 13:47:55 ON 24 JUN 2008
3 S 681242-79-5/CRN

L11 FILE 'CAPLUS' ENTERED AT 13:47:55 ON 24 JUN 2008
3 S L10
S 854985-66-3/CRN

L12 FILE 'REGISTRY' ENTERED AT 13:48:08 ON 24 JUN 2008
1 S 854985-66-3/CRN

L13 FILE 'CAPLUS' ENTERED AT 13:48:09 ON 24 JUN 2008
1 S L12

FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008

FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008

L14 SCREEN 2043
L15 STRUCTURE UPLOADED
L16 QUE L15 AND L14
L17 0 S L16
L18 3 S L16 SSS FULL
L19 STRUCTURE UPLOADED
L20 0 S L19 SSS SAM
L21 0 S L19 SSS FULL
L22 STRUCTURE UPLOADED
L23 0 S L22 SSS SAM
L24 0 S L22 SSS FULL
L25 STRUCTURE UPLOADED
L26 0 S L25 SSS SAM
L27 4 S L25 SSS FULL
L28 SCREEN 2043
L29 STRUCTURE UPLOADED
L30 QUE L29 AND L28
L31 0 S L30 SSS SAM
L32 11 S L30 SSS FULL

L33 FILE 'CAPLUS' ENTERED AT 14:06:28 ON 24 JUN 2008
2 S L27
L34 13 S L32
L35 2 S L33 AND L34
L36 1 S L35 NOT L1

=> s 134 not 135
L37 11 L34 NOT L35

=> d ibib abs hitstr hitind 1-11

L37 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2006:101051 CAPLUS Full-text
DOCUMENT NUMBER: 144:160286
TITLE: Polymer compositions for formation of protective
layers by immersion exposure, method for manufacture
of the compositions, and method for their patterning
INVENTOR(S): Inabe, Haruki; Kanna, Shinichi; Kanda, Hiromi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006030603	A	20060202	JP 2004-209569	20040716

PRIORITY APPLN. INFO.: JP 2004-209569 20040716

AB The compns. contain (A) water-insol. polymers showing solubility in alkaline, (B) solvents, preferably, a mixture of ≥ 2 solvents, and optionally (C) surfactants, and the contents of metal impurities in the compns. are controlled to ≤ 100 ppb. Method for manufacture of the compns. include filtration of the solution containing A with an ion exchange filter. In formation of resist patterns, the compns. are applied onto the resist layer, prior to its immersion exposure and development.

IT 862374-85-4 873933-26-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (metal impurity-controlled polymer compns. for formation of protective overlayers on photoresists for their patterning by immersion exposure and development)

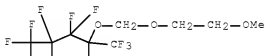
RN 862374-85-4 CAPLUS

CN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-[(2-methoxyethoxy)methoxy]-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

CM 1

CRN 862374-84-3

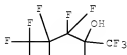
CMF C12 H14 F8 O3



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



RN 873933-26-7 CAPLUS

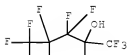
CN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-,

homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 637035-70-2

CMF C8 H6 F8 O



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 26873-70-1 59941-91-2 101944-39-2 484649-10-7 862374-85-4
873315-90-3 873933-25-6 873933-26-7

RL: TEM (Technical or engineered material use); USES (Uses)
(metal impurity-controlled polymer comps. for formation of protective overlays on photoresists for their patterning by immersion exposure and development)

L37 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1154596 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:423027

TITLE: Polymers for photoresist compositions with good resolution

INVENTOR(S): Ogata, Toshiyuki; Matsumaru, Syogo; Hada, Hideo; Yoshida, Masaaki

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2005100412	A1	20051027	WO 2005-JP6657	20050405
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
JP 2005325325	A	20051124	JP 2004-181068	20040618
JP 2006002073	A	20060105	JP 2004-181067	20040618
EP 1736485	A1	20061227	EP 2005-728789	20050405
R: BE				
US 20070224520	A1	20070927	US 2006-578189	20061011
KR 2007009620	A	20070118	KR 2006-721229	20061012

PRIORITY APPLN. INFO.:

JP 2004-117693	A	20040413
JP 2004-181067	A	20040618
JP 2004-181068	A	20040618
WO 2005-JP6657	W	20050405

OTHER SOURCE(S): MARPAT 143:423027

AB Title polymer compds. whose alkali solubility after exposure is significantly changed from one before exposure in a chemical amplified pos. resist system contain as an alkali-soluble group, a substituent selected from alc. hydroxyl groups, carboxyl groups and phenolic hydroxyl groups and protected with an acid-cleavable dissoln. inhibiting group $\text{CH}_2\text{OA}(\text{OCH}_2)_n$, wherein A = C1-20 organic group with $(n + 1)$ valance and $n = 1-4$ integer. Thus, 1,2-ethanediol and p-formaldehyde were reacted, purged with hydrogen chloride to give 1,2-bis(chloromethoxy)ethane, 0.9 g of which was reacted with 10.0 g 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-bicyclo[3.2.0]heptan-3-ol- 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0] heptane copolymer in the presence of sodium hydride at room temperature for 12 h to give a protected copolymer, 100 parts of which was mixed with triphenylsulfonium perfluorobutanesulfonate 4.0, triisopropylamine 0.4, and propylene glycol monomethyl ether acetate 1250 parts, applied on an antireflective-coated silicon wafer, heated at 110° for 90 s, irradiated through a photomask, heated at 90° for 60 s, developed using 38% aqueous tetramethylammonium hydroxide solution for 30 s, washed, and dried to give a good pattern.

IT 868157-51-1F
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers for photoresist compns. with good resolution)

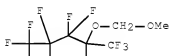
RN 868157-51-1 CAPLUS

CN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2-bis(chloromethoxy)ethane and 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

CM 1

CRN 681242-79-5

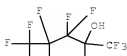
CMF C10 H10 F8 O2



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



CM 3

CRN 13483-18-6
CMF C4 H8 C12 O2

C1CH2—O—CH2—CH2—O—CH2C1

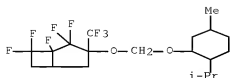
IC ICM C08F008-00
ICS C07C069-54; C08F020-20; G03F007-039
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 74
IT 868157-51-1P 868157-56-6P 868157-57-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymers for photoresist compns. with good resolution)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2005:811128 CAPLUS Full-text
DOCUMENT NUMBER: 143:219451
TITLE: F2 laser-sensitive positive photoresist compositions with high sensitivity and pattern formation using them
INVENTOR(S): Inabe, Haruki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	JP 2005221552	A	20050818	JP 2004-26698	20040203
PRIORITY APPLN. INFO.:				JP 2004-26698	20040203
AB	The compns. comprise (A) F-containing polymers increasing their alkali solubility in the presence of acids, (B) photoacid generators, and (C) mixed solvents consisting of ≥2 solvents, one of which is an alkoxyalc. having a C≥3 linking group between the alkoxy and the alc. OH.				
IT	862374-82-2 862374-85-4 RL: TEM (Technical or engineered material use); USES (Uses) (mixed solvents for F2 laser-sensitive pos. photoresists with high sensitivity)				
RN	862374-83-2 CAPLUS				
CN	Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-[[[5-methyl-2-(1-methylethyl)cyclohexyl]oxy]methoxy]-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)				

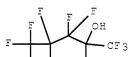
CM 1

CRN 862374-82-1
CMF C19 H26 F8 O2



CM 2

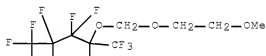
CRN 637035-70-2
CMF C8 H6 F8 O



RN 862374-85-4 CAPLUS
CN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-,
polymer with 1,2,2,7,7-pentafluoro-3-[(2-methoxyethoxy)methoxy]-3-
(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

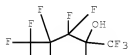
CM 1

CRN 862374-84-3
CMF C12 H14 F8 O3



CM 2

CRN 637035-70-2
CMF C8 H6 F8 O



IC ICM G03F007-039
 ICS G03F007-004; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 365568-38-3 819860-42-9 857285-72-4 862374-74-1 862374-75-2
 862374-77-4 862374-79-6 862374-81-0 862374-83-2
 862374-85-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (mixed solvents for F2 laser-sensitive pos. photoresists with high sensitivity)

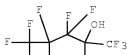
L37 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:281095 CAPLUS Full-text
 DOCUMENT NUMBER: 142:345160
 TITLE: Positive-working resist composition and pattern formation using it
 INVENTOR(S): Fujimori, Toru
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2005084238	A	20050331	JP 2003-314217	20030905
PRIORITY APPLN. INFO.:				JP 2003-314217	20030905
AB	The composition contains (A) a polymer substituted with F in the main chain, which decomps. by the action of an acid and increases its solubility to alkaline developer, (B) a compound generating an acid by irradiation of actinic ray, and (C) ≥ 2 kinds of basic compds. The resist film is formed, exposed, and developed for pattern formation. The composition is sensitive to F2 excimer laser beam (157 nm) and gives clear pattern without defect.				
IT	835632-99-9				
	RL: TEM (Technical or engineered material use); USES (Uses) (laser-sensitive resist composition containing fluoropolymer, acid generator, and basic compds.)				
RN	835632-99-0	CAPLUS			
CN	2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-hydroxyethyl 2-propenoate and 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)				

CM 1

CRN 637035-70-2

CMF C8 H6 F8 O



CM 2

CRN 1663-39-4

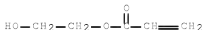
CMF C7 H12 O2



CM 3

CRN 818-61-1

CMF C5 H8 O3



IC ICM G03F007-039
ICS C08F212-14; C08F214-18; C08F216-14; C08F220-28; C08F232-08;
G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38
IT 262617-13-0 585573-41-7 735307-84-3 769193-80-8 769193-81-9
769193-82-0 769193-85-3 769193-87-5 769193-88-6 769193-89-7
769195-17-7 769195-18-8 835632-98-9 835632-99-0
848679-95-8
RL: TEM (Technical or engineered material use); USES (Uses)
(laser-sensitive resist composition containing fluoropolymer, acid
generator,
and basic compds.)

L37 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:235495 CAPLUS Full-text
DOCUMENT NUMBER: 142:306451
TITLE: Storage-stable positive photoresists for F2 excimer
laser lithography and patterning thereof
INVENTOR(S): Sasaki, Tomoya
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 98 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

JP 2005070327 A 20050317 JP 2003-299022 20030822
 PRIORITY APPLN. INFO.: JP 2003-299022 20030822

AB The photoresists containing (A) fluororesins (preferable Markush given) having F-substituted main chain or sidechains and increasing alkali solubility by acid action and (B) photoacid generators and satisfying water content $\leq 0.3\%$, are pasted, exposed, and developed to form patterns with low line-edge roughness. The resin A may be replaced by a combination of alkali-soluble fluororesins and nonpolymeric dissoln. inhibitors.

IT 764717-25-1

RL: TEM (Technical or engineered material use); USES (Uses)

(chemical amplified pos. resists containing decomposition-resistant fluororesins for F2 excimer laser lithog.)

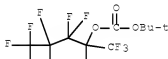
RN 764717-25-1 CAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]hept-3-yl ester, polymer with 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)

CM 1

CRN 764717-24-0

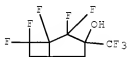
CMF C13 H14 F8 O3



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 370102-83-3 406702-00-9 430437-18-6 585573-50-8 607710-65-6
 607710-77-0 610300-98-6 610301-01-4 610301-04-7 672937-76-7
 677354-71-1 731861-92-0 731861-93-1 732299-47-7 762275-99-0
 764717-25-1 836614-75-6 847599-64-8 847599-66-0
 847599-67-1 847599-68-2 847599-69-3

RL: TEM (Technical or engineered material use); USES (Uses)

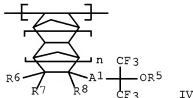
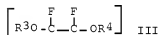
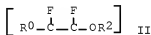
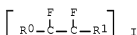
(chemical amplified pos. resists containing decomposition-resistant

fluororesins
for F2 excimer laser lithog.)

L37 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:120282 CAPLUS Full-text
DOCUMENT NUMBER: 142:186557
TITLE: Positive photoresist compositions containing
fluoropolymers for F2 excimer laser light lithography
INVENTOR(S): Fujimori, Toru
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----		-----	-----	-----
JP 2005037777	A	20050210	JP 2003-276092	20030717
PRIORITY APPLN. INFO.:			JP 2003-276092	20030717

GI



AB The photoresist compns. having high sensitivity to F2 excimer laser light contain (A) fluoropolymers which contain F replacing polymer main chains, decompose with acids and increase solubility in alkali developers, (B) photoacid generators, and (C) compds. containing ≥ 3 OH or substituted OH. Preferably, the fluoropolymers A contain ≥ 1 of repeating units selected from CFR^0CFR^1 , $\text{CFR}^0\text{CF}(\text{OR}^2)$, and $\text{CF}(\text{OR}^3)\text{CF}(\text{OR}^4)$ and ≥ 1 of repeating units selected from $\text{CH}_2\text{CH}[\text{CH}_2\text{C}(\text{CF}_3)2\text{OR}^5]$, I, $\text{CH}_2\text{CR}^9[\text{CO}_2\text{A}_2\text{C}(\text{CF}_3)2\text{OR}^5]$, II, $\text{CHR}^{13}\text{CR}^{14}(\text{CO}_2\text{R}^{15})$, and III $[\text{R}^0, \text{R}^1 = \text{H}, \text{F}, \text{alkyl}, \text{cycloalkyl}, \text{aryl}; \text{R}^2\text{--}\text{R}^4 = \text{alkyl}, \text{cycloalkyl}, \text{aryl}; \text{R}^0$ and R^1, R^0 and R^2 , and R^3 and R^4 may be bonded together and form ring; $\text{R}^5 = \text{alkyl}, \text{cycloalkyl}, \text{acyl}, \text{alkoxycarbonyl}; \text{R}^6\text{--}\text{R}^8 = \text{H}, \text{halo}, \text{alkyl}, \text{alkoxy}; \text{R}^9, \text{R}^{10} = \text{H}, \text{halo}, \text{cyano}, \text{alkyl}; \text{R}^{11}, \text{R}^{12} = \text{H}, \text{OH}, \text{halo}, \text{cyano}, \text{alkoxy}, \text{acyl}, \text{alkyl}, \text{cycloalkyl}, \text{alkenyl}, \text{aralkyl}, \text{aryl}; \text{R}^{13}, \text{R}^{14} = \text{H}, \text{halo}, \text{cyano}, \text{alkyl}; \text{R}^{15} = \text{CR}^{36}\text{R}^{37}\text{R}^{38}, \text{CR}^{36}\text{R}^{37}(\text{OR}^{39})$, IV; $\text{R}^{36}\text{--}\text{R}^{39} = \text{alkyl}, \text{cycloalkyl}, \text{alkenyl}, \text{aralkyl}, \text{aryl}; \geq 2$ of $\text{R}^{36}\text{--}\text{R}^{38}$, or $\text{R}^{36}, \text{R}^{37}$, and R^{39} may be bonded together and form ring; $\text{R}^{40} = \text{alkyl}, \text{cycloalkyl}, \text{alkenyl}, \text{alkynyl}, \text{aralkyl}, \text{aryl}; \text{Z} = \text{atom, group which form single or polycyclic alicyclic group with C atom}; \text{R}^{16}\text{--}\text{R}^{18} = \text{H}, \text{halo}, \text{cyano}, \text{alky}, \text{alkoxy}, \text{CO}_2\text{R}^{15}; \text{A}_1, \text{A}_2 = \text{single}$

bond, alkylene, alkenylene, cycloalkylene, divalent alicyclic group, divalent linking group formed by combination of these, O2CR22, CO2R23, CONR24R25; R22, R23, R25 = single bond, alkylene, alkenylene, cycloalkylene, arylene which may contain ether, ester, amide, urethane, or ureido group; R24 = H, alkyl, cycloalkyl, aralkyl, aryl; n = 0, 1; m = 1, 2].

IT 835632-99-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. photoresist compns. containing fluoropolymers, PAG, and saccharide derivs. for F2 excimer laser light lithog.)

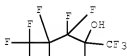
RN 835632-99-0 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 2-hydroxyethyl 2-propenoate and 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)

CM 1

CRN 637035-70-2

CMF C8 H6 F8 O



CM 2

CRN 1663-39-4

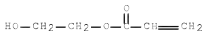
CMF C7 H12 O2



CM 3

CRN 818-61-1

CMF C5 H8 O3



IC ICM G03F007-039

ICS C08F014-18; C08F016-24; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 262617-13-0P 735307-84-3P 769193-80-8P 769193-81-9P 769193-82-0P
 769193-83-1P 769193-84-2P 769193-85-3P 769193-86-4P 769193-87-5P
 769193-88-6P 769193-89-7P 769195-17-7P 769195-18-8P
 835652-99-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (pos. photoresist compns. containing fluoropolymers, PAG, and saccharide derivs. for F2 excimer laser light lithog.)

L37 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS ON STN

ACCESSION NUMBER: 2005:78066 CAPLUS Full-text
 DOCUMENT NUMBER: 142:186539
 TITLE: Positive photosensitive composition and method of forming resist pattern
 INVENTOR(S): Kodama, Kunihiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 48 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050019690	A1	20050127	US 2004-895824	20040722
EP 1505439	A2	20050209	EP 2004-17305	20040722
EP 1505439	A3	20050420		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

JP 2005055890	A	20050303	JP 2004-215380	20040723
PRIORITY APPLN. INFO.:			JP 2003-278995	A 20030724

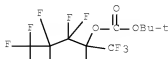
AB A pos. photosensitive composition comprises: (A) 5 to 20 parts by weight of the total amount of at least one compound that generates an acid upon irradiation with an actinic ray; and (B) 100 parts by weight of the total amount of at least one fluorine atom-containing resin having a group that increases a solubility of the resin in an alkaline developer by the action of an acid.

IT 764717-25-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (resin; pos. photosensitive composition for forming resist pattern containing)

RN 764717-25-1 CAPLUS
 CN Carbonic acid, 1,1-dimethylethyl 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]hept-3-yl ester, polymer with 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)

CM 1

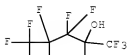
CRN 764717-24-0
 CMC C13 H14 F8 O3



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



IC ICM G03C001-76

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 143336-94-1 262617-13-0 370102-83-3 370866-39-0 406702-00-9
430437-18-6 585573-50-8 607710-65-6 607710-68-9 607710-71-4
607710-72-5 607710-73-6 610300-97-5 610300-98-6 610301-01-4
677354-71-1 679804-77-4 680603-11-6 731862-28-5 732299-47-7
762274-02-2 762274-05-5 762274-06-6 762275-99-0 764717-25-1

RL: TEM (Technical or engineered material use); USES (Uses)

(resin; pos. photosensitive composition for forming resist pattern containing)

L37 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:801637 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 141:322566

TITLE: Positive-working photoresist composition for 157 nm photolithography

INVENTOR(S): Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 72 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
JP 2004271844	A	20040930	JP 2003-61749	20030307
PRIORITY APPLN. INFO.:			JP 2003-61749	20030307

AB The title pos. working photoresist composition comprises an alkaline developable fluoropolymer containing a group -C(CR1R2R3)(CR4R5R6)OH [R1-6 = F, H, alkyl], an alkaline developable fluoropolymer containing a group(s) -C(CR1R2R3)(CR4R5R6)OQ and/or -CO2Q' [R1-6 = F, H, alkyl; Q, Q' = group capable of decomposing upon acid action], an alkaline developable fluoro compound, and a photoacid generator. The photoresist composition shows improved line-edge roughness and developability.

IT 765915-85-3P

RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(alkaline developable fluoropolymer; pos.-working photoresist composition)

for

157 nm photolithog.)

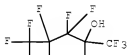
RN 765915-85-3 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylpropyl ester, polymer with 2-hydroxyethyl 2-propenoate and 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)

CM 1

CRN 637035-70-2

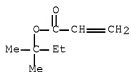
CMF C8 H6 F8 O



CM 2

CRN 7383-26-8

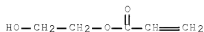
CMF C8 H14 O2



CM 3

CRN 818-61-1

CMF C5 H8 O3



IC ICM G03F007-039

ICS C08F212-14; C08F216-04; C08F216-14; C08F220-00; C08F232-04; C08F232-08; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 262617-10-7P 370866-39-0P 637035-70-2P 765915-76-2P 765915-77-3P
765915-78-4P 765915-79-5P 765915-80-8P 765915-82-0P 765915-83-1P
765915-84-2P 765915-85-3P 765915-86-4P 765915-87-5P

765942-17-4P

RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(alkaline developable fluoropolymer; pos.-working photoresist composition

for

157 nm photolithog.)

L37 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:796420 CAPLUS Full-text

DOCUMENT NUMBER: 141:304288

TITLE: Positive resist composition and method of forming
resist pattern using the same

INVENTOR(S): Kodama, Kunihiko

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 46 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
EP 1462858	A1	20040929	EP 2004-6536	20040318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
JP 2004287262	A	20041014	JP 2003-81260	20030324
US 20040197708	A1	20041007	US 2004-806451	20040323
US 7192685	B2	20070320		

PRIORITY APPLN. INFO.: JP 2003-81260 A 20030324

OTHER SOURCE(S): MARPAT 141:304288

AB A pos. resist composition comprising: (A) a fluorine atom-containing resin,
wherein the resin comprises at least one group that increases a solubility of
the resin in an alkali developer by the action of an acid; and (B) a sulfonium
salt compound having a cation moiety, wherein the cation moiety contains at
least one hydroxy group, and the sulfonium salt compound generates an acid
upon irradiation with one of an actinic ray and a radiation.

IT 764717-25-1

RL: TEM (Technical or engineered material use); USES (Uses)

(pos. resist composition from fluoropolymer and sulfonium salt photoacid)

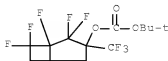
RN 764717-25-1 CAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1,2,2,7,7-pentafluoro-3-
(trifluoromethyl)bicyclo[3.2.0]hept-3-yl ester, polymer with
1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI)
(CA INDEX NAME)

CM 1

CRN 764717-24-0

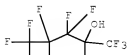
CMF C13 H14 F8 O3



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



IC ICM G03F007-004

ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 134993-70-7 240424-21-9 279218-75-6 367522-51-8 370102-83-3
524699-48-7 524699-56-7 524699-58-9 524699-59-0 524699-60-3
524699-61-4 585573-40-6 585573-50-8 607710-65-6 607710-74-7
669768-43-8 677354-71-1 732299-47-7 762274-01-1 762275-99-0
764717-19-3 764717-20-6 764717-21-7 764717-22-8 764717-23-9
764717-25-1 764717-26-2 764717-28-4 764717-29-5
764717-30-8 764717-32-0

RL: TEM (Technical or engineered material use); USES (Uses)

(pos. resist composition from fluoropolymer and sulfonium salt photoacid)

L37 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:1007889 CAPLUS Full-text

DOCUMENT NUMBER: 140:50326

TITLE: Positive resist composition containing specific multi functional epoxy compound for F2 excimer laser lithography

INVENTOR(S): Toishi, Kouji; Miya, Yoshiko; Uetani, Yasunori

PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

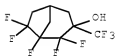
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 20030236351	A1	20031225	US 2003-404671	20030402
US 7129014	B2	20061031		
JP 2004004703	A	20040108	JP 2003-98932	20030402
PRIORITY APPLN. INFO.:			JP 2002-101003	A 20020403

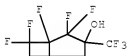
AB The present invention provides a pos. resist composition comprising a resin which itself is insol. or poorly soluble in an alkali aqueous solution but becomes soluble in an alkali aqueous solution by the action of an acid, an acid generator, and multifunctional epoxy compound, wherein the content of halogen atoms in the resin is $\geq 40\%$, at least one of structural units constituting the resin is a structural unit having an alicyclic hydrocarbon skeleton, and the structural unit having an alicyclic hydrocarbon skeleton contains therein at least one group rendering the resin soluble in an alkali

aqueous solution by the action of an acid, and at least one halogen atom. The composition is suitable for F2 excimer laser lithog. and provides good quality photoresist.

IT 637035-72-4DE, ethoxymethylated
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(resin; pos. resist composition)
RN 637035-72-4 CAPLUS
CN Bicyclo[3.2.1]octan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)bicyclo[3.2.0]heptan-3-ol (9CI) (CA INDEX NAME)
CM 1
CRN 637035-71-3
CMF C9 H8 F8 O



CM 2
CRN 637035-70-2
CMF C8 H6 F8 O



IC ICM C08F008-00
INCL 525107000; X52-552.3; X52-553.9; X52-541.6
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
IT 637035-72-4DE, ethoxymethylated
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(resin; pos. resist composition)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:570092 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 140:365497
TITLE: Study of resist outgassing by F2 laser irradiation
AUTHOR(S): Itakura, Yasuo; Kawasa, Youichi; Sumitani, Akira; Ishikawa, Seiichi; Irie, Shigeo; Itani, Toshiro

CORPORATE SOURCE: Research Division, Komatsu Ltd., Kanagawa, 254-8567, Japan

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2003), 5039(Pt. 1, Advances in Resist Technology and Processing XX), 524-532
CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB F2 laser lithog. at 157 nm is the most promising candidate of post-ArF excimer laser lithog. A major concern, however, is the deterioration of 157 nm optics due to contamination under F2 laser irradiation. An evaluation of outgassed products of 157 nm resist and their effect on optical materials and is therefore indispensable for F2 laser lithog. Semiconductor Leading Edge Technologies Inc. (Selete) and Komatsu Ltd. designed and constructed a resist outgassing evaluation system in order to develop exposure tools and resists for 157 nm lithog. The system detcs. the neg. effects of outgassing resist contaminants on the transmittance of optical materials under F2 laser irradiation. The system has two units. One unit collects resist outgas and analyzes sampled gas in a gas chromatograph mass spectrometer (GC-MS). The other unit is a resist outgassing adhesion unit, which measures the transmittance change of optical materials due to contamination adhesion in real-time. Our anal. showed that most outgassed products were from the resist protecting groups and photoacid generators (PAG) including small hydrocarbons like isobutene, benzene derivs. and dimethoxymethane. After irradiating a 157 nm lithog. resist with a total dose of 30 J/cm2 the transmittance of a calcium fluoride (CaF2) substrate decreased from initially 90% to 85%. This was due to adhesion contamination as XPS anal. showed an organic contamination deposition of over 5 nm thickness on the CaF2 substrate.

IT 681242-80-8
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(effects of outgassing contaminants from chemical amplified photoresist on transmittance of optical materials under F2 laser irradiation)

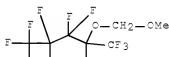
RN 681242-80-8 CAPLUS

CN Bicyclo[3.2.0]heptan-3-ol, 1,2,2,7,7-pentafluoro-3-(trifluoromethyl)-, polymer with 1,2,2,7,7-pentafluoro-3-(methoxymethoxy)-3-(trifluoromethyl)bicyclo[3.2.0]heptane (9CI) (CA INDEX NAME)

CM 1

CRN 681242-79-5

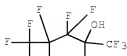
CMF C10 H10 F8 O2



CM 2

CRN 637035-70-2

CMF C8 H6 F8 O



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 365568-38-3 591767-91-8 681242-80-6
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (effects of outgassing contaminants from chemical amplified photoresist on transmittance of optical materials under F2 laser irradiation)
 REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL STNGUIDE		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	72.60	1010.93
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)		
	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-9.60	-10.40

FILE 'STNGUIDE' ENTERED AT 14:09:57 ON 24 JUN 2008
 USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
 COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
 LAST RELOADED: Jun 20, 2008 (20080620/UP).

=> d his nofil

(FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008

L1	1 SEA ABB=ON PLU=ON US20070148581/PN SEL RN
L2	62303 SEA ABB=ON PLU=ON (102-71-6/BI OR 11105-01-4/BI OR 69-72-7/BI OR 808752-25-2/BI OR 854985-67-4/BI)
L3	1 SEA ABB=ON PLU=ON L1 AND L2 D IBIB ABS HITSTR HITIND
L4	1 SEA ABB=ON PLU=ON 854985-67-4/RN

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008

L5	1 SEA ABB=ON PLU=ON 854985-67-4/RN D FIDE
----	--

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008

L6	1 SEA ABB=ON PLU=ON 854985-66-3/RN SET NOTICE 1 DISPLAY D L6 SQIDE 1- SET NOTICE LOGIN DISPLAY
L7	1 SEA ABB=ON PLU=ON 854985-66-3/RN

L8 1 SEA ABB=ON PLU=ON 681242-79-5/RN
 FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008
 L9 0 SEA ABB=ON PLU=ON L7 AND L8
 S 681242-79-5/CRN
 FILE 'REGISTRY' ENTERED AT 13:47:55 ON 24 JUN 2008
 L10 3 SEA ABB=ON PLU=ON 681242-79-5/CRN
 FILE 'CAPLUS' ENTERED AT 13:47:55 ON 24 JUN 2008
 L11 3 SEA ABB=ON PLU=ON L10
 S 854985-66-3/CRN
 FILE 'REGISTRY' ENTERED AT 13:48:08 ON 24 JUN 2008
 L12 1 SEA ABB=ON PLU=ON 854985-66-3/CRN
 FILE 'CAPLUS' ENTERED AT 13:48:09 ON 24 JUN 2008
 L13 1 SEA ABB=ON PLU=ON L12
 FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008
 FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008
 L14 SCREEN 2043
 L15 STRUCTURE UPLOADED
 L16 QUE ABB=ON PLU=ON L15 AND L14
 L17 0 SEA SSS SAM L15 AND L14
 L18 3 SEA SSS FUL L15 AND L14
 D SCAN
 L19 STRUCTURE UPLOADED
 L20 0 SEA SSS SAM L19
 L21 0 SEA SSS FUL L19
 L22 STRUCTURE UPLOADED
 L23 0 SEA SSS SAM L22
 L24 0 SEA SSS FUL L22
 L25 STRUCTURE UPLOADED
 L26 0 SEA SSS SAM L25
 L27 4 SEA SSS FUL L25
 D SCAN
 L28 SCREEN 2043
 L29 STRUCTURE UPLOADED
 L30 QUE ABB=ON PLU=ON L29 AND L28
 L31 0 SEA SSS SAM L29 AND L28
 L32 11 SEA SSS FUL L29 AND L28
 FILE 'CAPLUS' ENTERED AT 14:06:28 ON 24 JUN 2008
 L33 2 SEA ABB=ON PLU=ON L27
 L34 13 SEA ABB=ON PLU=ON L32
 L35 2 SEA ABB=ON PLU=ON L33 AND L34
 L36 1 SEA ABB=ON PLU=ON L35 NOT L1
 D IBIB ABS HITSTR HITIND
 L37 11 SEA ABB=ON PLU=ON L34 NOT L35
 D IBIB ABS HITSTR HITIND 1-11
 FILE 'STNGUIDE' ENTERED AT 14:09:57 ON 24 JUN 2008

=> FIL WPIX
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.66	1011.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-10.40

FILE 'WPIX' ENTERED AT 14:16:43 ON 24 JUN 2008
COPYRIGHT (C) 2008 THOMSON REUTERS

FILE LAST UPDATED: 20 JUN 2008 <20080620/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200839 <200839/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
>>> Now containing more than 1.1 million chemical structures in DCR <<<

>>> IPC Reform backfile reclassifications have been loaded to the end of March 2008. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC, 20071130/UPIC and 20080401/UPIC.
ECLA reclassifications to April and US national classifications to the end of January 2008 have also been loaded. Update dates 20080401/UPEC and /UPNC have been assigned to these. <<<

FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf

FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://scientific.thomsonreuters.com/support/patents/coverage/latestupdates/>

EXPLORE DERWENT WORLD PATENTS INDEX IN STN ANAVIST, VERSION 2.0:
http://www.stn-international.com/archive/presentations/DWPIAnaVist2_0710.pdf

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

>>> Please note that the COPYRIGHT notification has changed <<<

'BI BIEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> s l25

SAMPLE SEARCH INITIATED 14:18:34 FILE 'WPIX'
SAMPLE SCREEN SEARCH COMPLETED - 8 TO ITERATE

100.0% PROCESSED	8 ITERATIONS	0 ANSWERS
SEARCH TIME: 00.00.01		

FULL FILE PROJECTIONS:	ONLINE	**COMPLETE**
	BATCH	**COMPLETE**
PROJECTED ITERATIONS:	8 TO	164
PROJECTED ANSWERS:	0 TO	0

L38 0 SEA SSS SAM L25

=> s l25 full

FULL SEARCH INITIATED 14:18:42 FILE 'WPIX'
FULL SCREEN SEARCH COMPLETED - 49 TO ITERATE

100.0% PROCESSED	49 ITERATIONS	0 ANSWERS
SEARCH TIME: 00.00.01		

L39 0 SEA SSS FUL L25

=> s 129 full
FULL SEARCH INITIATED 14:18:53 FILE 'WPIX'
FULL SCREEN SEARCH COMPLETED - 49 TO ITERATE

100.0% PROCESSED 49 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L40 0 SEA SSS FUL L29

=> s 11

L41 1 US20070148581/PN

=> d full

L41 ANSWER 1 OF 1 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN
DNC C2005-145823 [48]
DNN N2005-390117 [48]
TI Photoresist composition for formation of resist pattern, contains polymer component containing alkali-soluble structural unit with preset aliphatic cyclic base, and acid generating-agent component containing specific sulfonium compound
DC A89; E13; G06; L03; P84; P83; U11
IN ENDO K; TSUJI H
PA (TOKQ-C) TOKYO OHKA KOGYO CO LTD
CYC 106
PI WO 2005057284 A1 20050623 (200548)* JA 27[0]
JP 2005172949 A 20050630 (200548) JA 16
US 20070148581 A1 20070628 (200743) EN <--
ADT WO 2005057284 A1 WO 2004-JP17719 20041129; JP 2005172949 A JP 2003-409500 20031208; US 20070148581 A1 WO 2004-JP17719 20041129; US 20070148581 A1 US 2006-581777 20060606
PRAI JP 2003-409500 20031208
IPCI G03C0001-00 [I,A]; G03C0001-00 [I,C]
IPCR G03F0007-004 [I,A]; G03F0007-004 [I,C]; G03F0007-039 [I,A]; G03F0007-039 [I,C]; H01L0021-02 [I,C]; H01L0021-027 [I,A]
EPC G03F0007-004D; G03F0007-004F; G03F0007-039C1; G03F0007-039C1S
NCL NCLM 430/270.100
AB WO 2005057284 A1 UPAB: 20051223
NOVELTY - The photoresist composition consists of a polymer component (A) whose alkali solubility changes by effect of an acid, and an acid generating-agent component (B) containing specific sulfonium compound. The polymer component (A) contains an alkali-soluble structural unit with the aliphatic cyclic base having both:
(i) fluorine atom and a fluorinated alkyl group; and
(ii) alcoholic hydroxyl group.
DETAILED DESCRIPTION - The photoresist composition consists of a polymer component (A) whose alkali solubility changes by effect of an acid, and an acid generating-agent component (B) containing at least one type of sulfonium compound of formula (I) which generates an acid by exposure. The polymer component (A) contains an alkali-soluble structural unit with the aliphatic cyclic base having both:
(i) fluorine atom and a fluorinated alkyl group; and
(ii) alcoholic hydroxyl group.
X = 2-6C alkylene base in which at least one hydrogen atom is substituted with fluorine atom; and
R1-R3 = aryl group or alkyl group, at least one of R1-R3 is an aryl group.
An INDEPENDENT CLAIM is included for the formation method of resist pattern. The method involves applying the photoresist composition on

substrate, to form a resist film which is exposed alternatively. After exposure, heating and image development are performed.

USE - For formation method of resist pattern (claimed) used for semiconductor integrated circuit, by lithography.

ADVANTAGE - The photoresist composition provides resist film having improved resolution. The photoresist composition has excellent storage stability.

TECH ORGANIC CHEMISTRY - Preferred Composition: The photoresist composition further contains:

- (1) nitrogen-containing organic compound; or
- (2) carboxylic acid, oxo-acid of phosphorus or its derivative(s).

INORGANIC CHEMISTRY - Preferred Substrate: The substrate is provided with silicon oxynitride film.

ABEX EXAMPLE - A fluorine-containing polymer (in pts.wt.) (100) containing components of formulae (5A) and (5B) (where X and Y are molar ratio, and X:Y=50:50) protected by methoxy methyl group, an acid generating agent (5) of formula (16), triethanolamine (0.1) and salicylic acid (0.1) were introduced into propylene glycol monomethyl ether acetate (1300). Mixing was performed to obtain a photoresist composition. The obtained photoresist composition was applied uniformly on a silicon wafer provided with a thin film of silicon oxynitride. Heating was performed for 90 seconds at 90 degrees C, followed by drying to obtain a resist film of thickness 180 nm. Selective exposure was performed, followed by heating. The obtained pattern was developed using a solution of 2.38 wt.% tetramethyl ammonium hydroxide. Image development was performed for 60 seconds at 23 degrees C, followed by washing and drying, to form a pattern. The rectangle property of the composition was exhibited when the cross-sectional shape of the line of the pattern was observed. Film decrease was found to be eliminated. - R5 = H, 1-15C aryl or alkyl group.

FS CPI; GMPI; EPI

MC CPI: A12-E07C; A12-L02B2; E07-F03; E10-A01; E11-P; E31-P06E; G06-D06A; G06-F03C; G06-F03D; G06-G17; G06-G18; L04-C05; L04-C06B1
EPI: U11-A06A; U11-C04E2

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	217.78	1229.37
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-10.40

FILE 'REGISTRY' ENTERED AT 14:20:58 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8
DICTIONARY FILE UPDATES: 23 JUN 2008 HIGHEST RN 1030103-54-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when

conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> s fluoropolymer/pct
L42      11507 FLUOROPOLYMER/PCT
```

```
=> help pct
```

Searches in the REGISTRY File may be restricted to certain polymer classes.

Polymer class terms (/PCT) are assigned to all polymers in the REGISTRY File except oligomers (dimers, trimers, tetramers, etc) and coordination compound polymers that would only receive the class POLYOTHER or one of the MANUAL class terms. If the classification for a polymer is uncertain, it receives the class POLYOTHER.

Polymer class terms are assigned algorithmically. Each term represents the structural characteristics of the polymer backbone and reflects:

- the types of linkages formed in the polymerization process
- linkages already present within the monomer backbone
- linkages present in structural repeating unit (SRU) backbones

If, when assigning the polymer class terms, the system identifies that a linkage for a certain class was formed during the polymerization process, a second polymer class term with the word FORMED added is indexed. When you search a class term without the word FORMED, you also retrieve the FORMED polymers. FORMED terms are present for all classes except resins, addition polymers, double stranded polymers, and polynucleotides.

There are currently (7/93) 143 polymer class terms. These may be viewed by expanding on the /PCT field. PCT and POLYMER CLASS TERM are also indexed in the /FA field.

```
=> FIL CAPLUS
COST IN U.S. DOLLARS                SINCE FILE      TOTAL
                                     ENTRY             SESSION
FULL ESTIMATED COST                7.86           1237.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE      TOTAL
                                               ENTRY             SESSION
CA SUBSCRIBER PRICE                0.00           -10.40
```

FILE 'CAPLUS' ENTERED AT 14:21:45 ON 24 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is

held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on SIN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Jun 2008 VOL 148 ISS 26
FILE LAST UPDATED: 23 Jun 2008 (20080623/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s 142
L43 95125 L42

=> s photoresist? or ?resist?
64711 PHOTORESIST?
1814707 ?RESIST?
L44 1814707 PHOTORESIST? OR ?RESIST?

=> s 143 and 144
L45 20558 L43 AND L44

=> s acid(2a)generator
4601553 ACID
1633170 ACIDS
5114768 ACID
(ACID OR ACIDS)
95090 GENERATOR
42304 GENERATORS
116870 GENERATOR
(GENERATOR OR GENERATORS)
L46 3898 ACID(2A)GENERATOR

=> s 145 and 146
L47 63 L45 AND L46

=> s (69-72-7 or 102-71-6 or 69-72-7)/rn
29444 69-72-7
3582 69-72-7D
26390 69-72-7/RN
(69-72-7 (NOTL) 69-72-7D)
22226 102-71-6
2609 102-71-6D
19871 102-71-6/RN
(102-71-6 (NOTL) 102-71-6D)
29444 69-72-7
3582 69-72-7D
26390 69-72-7/RN
(69-72-7 (NOTL) 69-72-7D)
L48 45953 (69-72-7 OR 102-71-6 OR 69-72-7)/RN

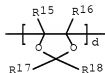
=> s 147 and 148
L49 1 L47 AND L48

=> s 149 not 11
 L50 1 L49 NOT L1
 => d ibib abs hitstr hitind

L50 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:275109 CAPLUS Full-text
 DOCUMENT NUMBER: 138:311562
 TITLE: Chemical amplification resist material
 containing fluoropolymer compound and dissolution
 inhibitor and method of patterning
 INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasako,
 Masaru; Endo, Masataka; Kishimura, Shinji; Otani,
 Michitaka; Komoritani, Haruhiko; Maeda, Kazuhiko
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan;
 Matsushita Electric Industrial Co., Ltd.; Central
 Glass Co., Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2003107706	A	20030409	JP 2001-296608	20010927
JP 3945200	B2	20070718		
PRIORITY APPLN. INFO.:			JP 2001-296608	20010927
OTHER SOURCE(S):	MARPAT 138:311562			

GI



I

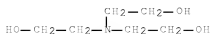
AB The chemical amplification resist material comprises (A) a polymer compound containing ≥ 1 F and (B) a dissoln. inhibitor represented by $R_4(-R_3CR_1R_2OR_5)_n$ ($R_1, 2 = H, F, C1-4$ alkyl, etc.; $R_3 =$ single bond, $C1-4$ alkylene; $R_4 = n$ -valent $C4-40$ aromatic group or cyclic diene; $R_5 =$ acid unstable group; and $n = 2, 3, 4$), (C) an organic solvent, and (D) an acid generator. The component (A) may be represented by $(R_7R_9C-CR_8R_{10})_a$, $[R_{11}C(C(:O)OR_{12})-CH_2]_b$, $[R_{13}C(C(:O)OR_{14})-CH_2]_c$, or I ($R_7-11 = H, F$, trifluoromethyl; $R_{12} = C1-20$ alkyl; $R_{13} =$ trifluoromethyl; $R_{14} =$ acid unstable group; $R_{15}, 16 = H, F$; $R_{17}, 18 = Me$, trifluoromethyl; and at least one of $R_{15}-18$ contains F). The chemical amplification resist material further contains a basic compound. The process using a F2 laser or an Ar2 laser is also claimed.

IT 102-71-6, Triethanolamine, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (basic compound; chemical amplification resist material containing

fluoropolymer compound and dissoln. inhibitor)

RN 102-71-6 CAPLUS

CN Ethanol, 2,2',2''-nitrilotris- (CA INDEX NAME)



IT 508217-83-2

RL: TEM (Technical or engineered material use); USES (Uses)
(fluoropolymer; chemical amplification resist material containing
fluoropolymer compound and dissoln. inhibitor)

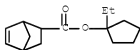
RN 508217-83-2 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1-ethylcyclopentyl ester,
polymer with α,α -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-
2-ethanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 279243-69-5

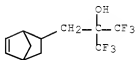
CMF C15 H22 O2



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-039
ICS G03F007-004; G03F007-38; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST chem amplification resist photoresist fluoropolymer
dissoln inhibitor

IT Photoresists
Resists
(patterning of chemical amplification resist material containing fluoropolymer compound and dissoln. inhibitor)

IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine
3002-18-4 211919-60-7 449165-34-8
RL: TEM (Technical or engineered material use); USES (Uses)
(basic compound; chemical amplification resist material containing fluoropolymer compound and dissoln. inhibitor)

IT 117458-06-7 153821-77-3 508217-87-6 508217-88-7 508217-89-8
508217-90-1 508217-92-3 508217-94-5 508217-96-7 508217-98-9
508218-00-6 508218-01-7 508218-02-8 508218-03-9 508218-04-0
508218-05-1 508218-06-2 508218-07-3 508218-08-4
RL: TEM (Technical or engineered material use); USES (Uses)
(dissoln. inhibitor; chemical amplification resist material containing fluoropolymer compound and dissoln. inhibitor)

IT 475471-96-6 508217-81-0 508217-82-1 508217-83-2
508217-84-3 508217-86-5
RL: TEM (Technical or engineered material use); USES (Uses)
(fluoropolymer; chemical amplification resist material containing fluoropolymer compound and dissoln. inhibitor)

IT 144317-44-2
RL: CAT (Catalyst use); USES (Uses)
(photoacid; chemical amplification resist material containing fluoropolymer compound and dissoln. inhibitor)

=> d his nofil

(FILE 'HOME' ENTERED AT 13:38:14 ON 24 JUN 2008)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 24 JUN 2008

L1 1 SEA ABB=ON PLU=ON US20070148581/PN
SEL RN

L2 62303 SEA ABB=ON PLU=ON (102-71-6/BI OR 11105-01-4/BI OR 69-72-7/BI
OR 808752-25-2/BI OR 854985-67-4/BI)

L3 1 SEA ABB=ON PLU=ON L1 AND L2
D IBIB ABS HITSTR HITIND

L4 1 SEA ABB=ON PLU=ON 854985-67-4/RN

FILE 'REGISTRY' ENTERED AT 13:44:32 ON 24 JUN 2008

L5 1 SEA ABB=ON PLU=ON 854985-67-4/RN
D FIDE

FILE 'REGISTRY' ENTERED AT 13:45:32 ON 24 JUN 2008

L6 1 SEA ABB=ON PLU=ON 854985-66-3/RN
SET NOTICE 1 DISPLAY
D L6 SQIDE 1-
SET NOTICE LOGIN DISPLAY

L7 1 SEA ABB=ON PLU=ON 854985-66-3/RN

```

L8          1 SEA ABB=ON  PLU=ON  681242-79-5/RN

FILE 'CAPLUS' ENTERED AT 13:47:18 ON 24 JUN 2008
L9          0 SEA ABB=ON  PLU=ON  L7 AND L8
            S 681242-79-5/CRN

FILE 'REGISTRY' ENTERED AT 13:47:55 ON 24 JUN 2008
L10         3 SEA ABB=ON  PLU=ON  681242-79-5/CRN

FILE 'CAPLUS' ENTERED AT 13:47:55 ON 24 JUN 2008
L11         3 SEA ABB=ON  PLU=ON  L10
            S 854985-66-3/CRN

FILE 'REGISTRY' ENTERED AT 13:48:08 ON 24 JUN 2008
L12         1 SEA ABB=ON  PLU=ON  854985-66-3/CRN

FILE 'CAPLUS' ENTERED AT 13:48:09 ON 24 JUN 2008
L13         1 SEA ABB=ON  PLU=ON  L12

FILE 'STNGUIDE' ENTERED AT 13:50:26 ON 24 JUN 2008

FILE 'REGISTRY' ENTERED AT 13:53:16 ON 24 JUN 2008
L14         SCREEN 2043
L15         STRUCTURE UPLOADED
L16         QUE ABB=ON  PLU=ON  L15 AND L14
L17         0 SEA SSS SAM L15 AND L14
L18         3 SEA SSS FUL L15 AND L14
            D SCAN
L19         STRUCTURE UPLOADED
L20         0 SEA SSS SAM L19
L21         0 SEA SSS FUL L19
L22         STRUCTURE UPLOADED
L23         0 SEA SSS SAM L22
L24         0 SEA SSS FUL L22
L25         STRUCTURE UPLOADED
L26         0 SEA SSS SAM L25
L27         4 SEA SSS FUL L25
            D SCAN
L28         SCREEN 2043
L29         STRUCTURE UPLOADED
L30         QUE ABB=ON  PLU=ON  L29 AND L28
L31         0 SEA SSS SAM L29 AND L28
L32         11 SEA SSS FUL L29 AND L28

FILE 'CAPLUS' ENTERED AT 14:06:28 ON 24 JUN 2008
L33         2 SEA ABB=ON  PLU=ON  L27
L34         13 SEA ABB=ON  PLU=ON  L32
L35         2 SEA ABB=ON  PLU=ON  L33 AND L34
L36         1 SEA ABB=ON  PLU=ON  L35 NOT L1
            D IBIB ABS HITSTR HITIND
L37         11 SEA ABB=ON  PLU=ON  L34 NOT L35
            D IBIB ABS HITSTR HITIND 1-11

FILE 'STNGUIDE' ENTERED AT 14:09:57 ON 24 JUN 2008

FILE 'WPIX' ENTERED AT 14:16:43 ON 24 JUN 2008
L38         0 SEA SSS SAM L25
L39         0 SEA SSS FUL L25
L40         0 SEA SSS FUL L29
L41         1 SEA ABB=ON  PLU=ON  US20070148581/PN

```

D FULL

FILE 'REGISTRY' ENTERED AT 14:20:58 ON 24 JUN 2008
 L42 11507 SEA ABB=ON PLU=ON FLUOROPOLYMER/PCT

FILE 'CAPLUS' ENTERED AT 14:21:45 ON 24 JUN 2008
 L43 95125 SEA ABB=ON PLU=ON L42
 L44 1814707 SEA ABB=ON PLU=ON PHOTORESIST? OR ?RESIST?
 L45 20558 SEA ABB=ON PLU=ON L43 AND L44
 L46 3898 SEA ABB=ON PLU=ON ACID(2A)GENERATOR
 L47 63 SEA ABB=ON PLU=ON L45 AND L46
 L48 45953 SEA ABB=ON PLU=ON (69-72-7 OR 102-71-6 OR 69-72-7)/RN
 L49 1 SEA ABB=ON PLU=ON L47 AND L48
 L50 1 SEA ABB=ON PLU=ON L49 NOT L1
 D IBIB ABS HITSTR HITIND

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	31.81	1269.04
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.80	-11.20

SESSION WILL BE HELD FOR 120 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 14:27:55 ON 24 JUN 2008